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nemisphere, the phenomena are found to present the same obvious and decided features of a duplicate system as those of the northern. Particular attention is given to those lines traversed by the ship's course where the needle attains its maximum declination, whether easterly or westerly, as affording valuable data for the estimation of secular variations. The results obtained by the present expedition confirm the conclusion deducible from those of previous navigators; namely, that the spaces in the Southern Pacific, distinguished by certain magnetic characters, undergo a movement of translation, of which the general direction is from east to west; a direction which is the opposite to that in which a similar change takes place in the corresponding regions of the northern hemisphere; namely, in the Siberian quarter, where the secular movement is from west to east.

April 25, 1844.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

1. "On the production of Ozone by Chemical Means." By C. F. Shoenbein, Professor of Chemistry at Basle, in a second letter to Michael Faraday, Esq., D.C.L., F.R.S. Communicated by Dr. Faraday.

The author adduces further evidence in support of the opinions he advanced in his former communication relative to the identity of the odoriferous principles which are disengaged during electric discharges in common air, during the electrolysis of water, and during the slow action of phosphorus upon atmospheric air. This principle, termed *Ozone*, he regards as being a simple body, and a constituent of azote, which he believes to be a compound of hydrogen and ozone; and he explains the disengagement of this latter element, which he considers as analogous in its chemical character to chlorine, by the partial decomposition of azote, in consequence of its hydrogen combining with oxygen, in the several processes above-mentioned during which ozone makes its appearance.

2. "On the existence of Phosphoric Acid in Rocks of igneous origin." By George Fownes, Esq., Ph. D., Chemical Lecturer in the Middlesex Hospital Medical School. Communicated by Thomas Graham, Esq., F.R.S.

The author has, by careful analysis, ascertained the presence of phosphoric acid in various rocks of igneous origin. Those which he examined were principally the following; namely, 1. The fine white porcelain clay of Dartmoor, resulting from the disintegration of the felspar of the granite of that district. 2. Dark grey vesicular lava from the Rhine, used at Cologne as a building-stone. 3. White trachyte from the Drachenfels, near Bonn. 4. Dark red, spongy, scoriaceous lava from Vesuvius. 5. Compact, dark green basalt, or toadstone from Cavedale, Derbyshire. 6. Dark blackish-green basalt from the neighbourhood of Dudley, termed